Department of Telecommunications and Energy
First Set of Information Requests

THE BERKSHIRE GAS COMPANY
D.T.E. 04-GC-31

Witness: **Jennifer M. Boucher**
Date Filed: **January 31, 2005**

Question DTE 1-1: Refer to the Explanatory Statement at 7 and Berkshire Gas Company, D.T.E. 01-56, at 27 (2002). Please explain and justify why the Company has proposed that the Department approve the University of Massachusetts - Amherst ("UMass") contract given that the contract extends beyond expiration of the Company's performance-based rate plan approved in D.T.E. 01-56.

Response: There are several principal reasons that the Transportation Agreement reflects a 20-year contract term with UMass. First, because of the substantial amount of infrastructure improvements required to serve the CHP load and the associated cost, the Company needed to assure cost recovery from this customer. Ultimately, Berkshire agreed upon a fixed 20-year term that provides financial certainty to the remaining Berkshire customers who could otherwise be burdened with such costs for facilities that would not have otherwise have been needed or constructed. The 20-year term also comports to UMass' capital and operating budgetary requirements.

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Question DTE 1-2: Refer to Sch. BGC-3. Please provide the discount rate that the Company used in this schedule. Also provide all workpapers, spreadsheets, and assumptions used to support the expected investment amount included in col. 3 and the operation and maintenance ("O&M") expenses in col. 5. Please also provide the formulas used to calculate the revenue values in col. 4 and the depreciation and income tax values in col. 6.

Response: 1) The discount rate that the Company used in Schedule BGC-3 is 7.85%. This rate is the after-tax cost of new capital which is derived from the weighted cost of incremental capital less the tax savings on debt interest. It is calculated as follows:

	Cost (1)	Ratio (2)	Weighting (3)	Reference
Debt	8.56%	50.00%	4.28%	Column (1) times column (2)
Common	10.50%	50.00%	5.25%	Column (1) times column (2)
Wtd Cost of Inc Capital			9.53%	
Tax savings from debt			-1.68%	(Debt Weighting * 39.23% tax rate)
After tax cost of new capital			**7.85%**	(Wtd Cost of Inc Capital less Tax Savings from Debt)

2) Attachment DTE-1-2 provides the workpaper to support the expected investment amount included in column 3. As noted, this was a planning level estimate and the Company's EFSB case will include route specific cost estimates.

3) The expenses in column 5 include both estimated distribution O & M expense as well as estimated property tax expense. These expenses are calculated by applying percentages to the investment. The O & M expense percentage was derived from the Compliance Filing Marginal Cost Study of D.T.E 01-56:

Marginal Cost O & M Expense	$29.03	MCS Table 5, p. 1, line 37
Marginal Cost Plant Additions	843.27	MCS Table 2, p. 1, line 42
O & M Percentage	3.44%	(O & M divided by Plant Additions)
Test to Rate Year Inflation	15.19%	Schedule BGC-4
Updated O & M Percentage	3.97%	(O & M Percentage times (1 plus inflation))

Question
DTE 1-2 Response
Cont'd.:

The updated O & M percentage is increased by a 2% inflation factor and applied to the estimated $ investment annually. The Company used 2.5% as the initial property tax expense percentage. This percentage is increased by a 2% inflation factor and applied to the investment; the investment used in this calculation is reduced annually by book depreciation. Subsequently, the resulting O & M expense and property tax expense are summed and presented as column 5 of Schedule BGC-3.

4) Attachment DTE-1-2 provides the workpaper to support the planning assumption for revenue amounts in column 3 that was employed in the Company's analysis of the terms of the Transportation Agreement.

5) Depreciation was derived by taking the investment times the appropriate MACRS depreciation rate. Income Taxes are derived by subtracting O & M expense and depreciation from revenues, and multiplying the result by the Company weighted tax rate of 39.23%. Subsequently, the resulting depreciation expense and income tax expense are summed and presented in column 6 of Schedule BGC-3.

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Question DTE 1-3: Refer to the Explanatory Statement at 4 and 7. Please clarify whether the Company intends to recover any system upgrade costs (including construction as well as O&M costs) exclusively from UMass and not from Berkshire's ratepayers for the main expansion required to serve UMass under the proposed contract.

Response: As an initial matter, the final revenue determinants were the result of many years of creative negotiations. Initially, the Company utilized its T-54, Extra Large Annual Use, High Load Factor rate as the basis for the revenue determinant; this is the rate under which the current UMass boiler facility is served. During negotiations with the Company, it became clear that UMass was pursuing a meaningful by-pass alternative, and, in fact, UMass provided the Company with their high and low bypass cost estimates. After careful consideration, the Company concluded that the price terms ultimately agreed to in the Transportation Agreement were warranted to retain this important customer and that all system customers would ultimately benefit from such an arrangement.

In determining the final price structure, the Company performed financial analyses to ensure that the project provided the necessary and appropriate returns. First, the Company performed a marginal cost analysis to ensure that the revenues collected exceeded the marginal cost of providing the natural gas service. Then, the Company utilized discounted cash flow analysis to ascertain that the project's return superceded the Company's hurdle rate, both on an incremental and total revenue basis. Based on Schedule BGC-3 Incremental, the estimated rate per Dth to be collected over the term of the contract is $.

In terms of future rate treatment, the Company believes that it has demonstrated that the Transportation Agreement satisfies relevant Department standards. The Company expects to reflect anticipated and actual system benefits from plant additions in any cost analyses submitted in future base rate proceedings.

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Question DTE 1-4: Refer to the Explanatory Statement at 4. Please discuss how liquified natural gas ("LNG") from the Company's Whately facility will be dispatched to serve UMass. As part of the discussion, explain whether the dispatch of LNG will affect system integrity and pressures during peak periods.

Response: Analysis of the Company's Greenfield Division provides that when the UMass CHP is operational, the Maximum Daily Quantity ("MDQ") of the Tennessee Gas Pipeline Sales Meter Station (12,380 Dth) that serves this division would be exceeded at approximately a day with 34 heating degree days; that is, no additional gas supplies can enter the Company's distribution system via the interstate pipeline. As part of the Transportation Agreement, the Company will notify UMass that LNG will be required to fulfill the delivery obligations at this specified degree day level and above. UMass shall either elect to take such LNG service and pay Berkshire for the LNG required, or may elect to curtail delivery and switch some or all of the operations at the CHP to an alternate fuel. In addition, the Agreement provides that the Company may curtail delivery of all or part of the CHP volumes to UMass for 360 hours per year. This additional benefit will allow the Company to curtail delivery to UMass during peak periods when system integrity and pressure issues are resolved by the dispatch of LNG from the Whately facility. In fact, the Company expects the new facilities to be added in connection with the Transportation Agreement to defer for some time the need for the third tank at the Company's Whately LNG facility. In sum, the Transportation Agreement preserves the system integrity and pressure benefits achieved with the Whately facility.

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Question DTE 1-5: Please discuss if the Company intends to construct additional LNG tanks to perform Berkshire's obligations under this contract. If yes, please indicate whether the Company intends to recover such construction and O&M costs from UMass only and not from Berkshire's ratepayers.

Response: The Company will not need to install additional LNG tanks to perform its obligations under this contract since the system improvements associated with the project will serve the load without the installation of an additional tank based on existing conditions. Further, the Transportation Agreement provides that service to UMass may be curtailed for up to 360 hours annually which means UMass will not be served during peak periods. The Company's determination as to the timing of the installation of additional LNG tanks will be based upon conditions unrelated to the Transportation Agreement; that is, a new tank will be added based on system requirements in the Greenfield Division, not UMass specifically. Further, this analysis will be based on existing conditions – i.e., the price of LNG, trucking availability, and deliverability of LNG into the Boston harbor. Changes in any of these assumptions could accelerate or defer the need for an additional tank. Nonetheless, the facilities added in connection with the Transportation Agreement provide ancillary benefits to all other customers in that on non-peak days those infrastructure improvements will facilitate the utilization of interstate pipeline gas rather than the dispatch of LNG for system integrity and pressure issues.

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Question
DTE 1-6: Please refer to the Explanatory Statement at 7. Berkshire states that the Company will be filing a petition before the Energy Facilities Siting Board ("EFSB") in 2005 regarding infrastructure improvements. Berkshire further notes that: "the Company's EFSB analysis is expected to include a more refined cost analysis" than the one presented here. Explain in detail how the two cost analyses will differ and why the Company did not present a similarly refined cost-analysis in this presentation.

Response: The costs utilized in the development of the Transportation Agreement were based upon an estimate of similar large project pipeline construction costs. These costs were understood to likely be different than the costs in any future EFSB filing, as more specific routes, and detailed cost estimates for those specific routes will be presented in the EFSB Filing. These "refined" cost estimates will capture the various factors and risks that are specific to each particular route or route segment. The costs used for both purposes, the Transportation Agreement and the EFSB Filing, are both estimates and actual costs may, in fact, vary.